



DoSER

Dialogue on
Science, Ethics,
& Religion

Science in Continuing Education for Pastors

Pilot Project



Executive Summary

In partnership with four theological education institutions, the American Association for the Advancement of Science (AAAS) Dialogue on Science, Ethics, and Religion (DoSER) program conducted a pilot project called Science in Continuing Education for Pastors. Designed to enrich continuing education curricula for clergy, the project integrated scientific and technological topics that are relevant to contemporary pastoral ministry into continuing education courses. Building on resources and relationships developed through DoSER's Science for Seminaries project, which helps seminaries incorporate science into their core curricula for degree-seeking students, this effort sought to reach pastors with little to no science exposure in their previous training. Having long promoted public education about the value of science in advancing human welfare, AAAS was uniquely positioned to offer this opportunity.

The Continuing Education project aimed to increase religious leaders' engagement with science so they felt comfortable discussing scientific topics and issues with their congregants. This was accomplished by incorporating science into religious leaders' continuing education courses while also removing barriers of time, cost, and availability that can prevent ministers and pastors from attending such courses. Because continuing education programs exhibit a wide range of formats, topics, and settings, DoSER worked with seminary project leaders to develop an individual pedagogical framework for each pastoral community, including the platform (in-person and online classes) and the topics for exploration.

The partnering seminaries began program design in August 2017, and held classes and events from September 2017 through December 2018. DoSER hosted a culminating workshop at AAAS Headquarters in Washington, D.C. in August 2019, convening project participants as well as local scientists and pastors to generate and consider ideas for a second phase of the Continuing Education project.

To measure the broader impacts of the project on ministerial contexts, sociologist Dr. Erica Dollhopf, Visiting Assistant Professor of Religion and Society at Hartford Seminary, worked with the partner seminaries to administer surveys and conduct interviews with attendees. She found that participants gained interest in science, wanted to include science in their congregational engagement, and desired more science-themed classes and events.

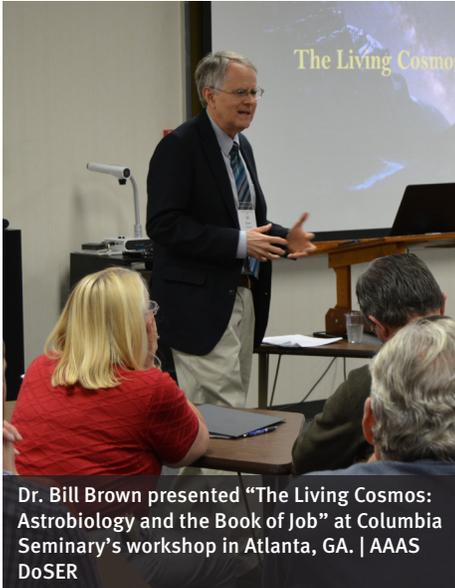
DoSER anticipates a second phase of the Science in Continuing Education for Pastors project that will incorporate the knowledge gained from the four seminaries' programs and suggestions from workshop participants. The second phase will build upon the pilot project to expand interactions with the theological education community and congregations that are interested in having conversations at the nexus of science and faith.



Jennifer Wiseman, Director



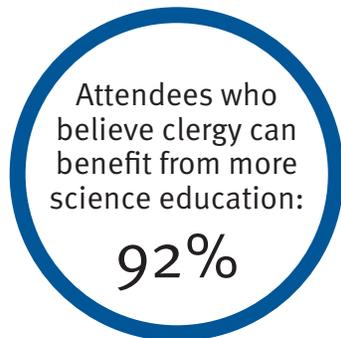
Curtis Baxter, Senior Program Associate and Continuing Education Project Lead



Dr. Bill Brown presented “The Living Cosmos: Astrobiology and the Book of Job” at Columbia Seminary’s workshop in Atlanta, GA. | AAAS DoSER

Program Overview

Science in Continuing Education for Pastors was an 18-month pilot project by AAAS that provided science-focused professional enrichment opportunities to clergy who had completed their ministerial training. The project sought to address the lack of programs and resources available to practicing pastors who want to respond to interests and concerns about science raised by their congregants. Four Christian seminaries (Andover Newton Seminary at Yale Divinity School, Columbia Theological Seminary, Concordia Seminary of the Lutheran Church Missouri Synod, and Pittsburgh Theological Seminary) worked with DoSER to develop innovative, science-driven programs that supported religious leaders and encouraged engagement with the sciences in their congregations. These programs also addressed barriers to participation, such as time, cost, and availability, that are often felt by clergy seeking continuing education. Approximately 565 clergy and church leaders participated in the science-themed continuing education courses or events associated with the seminaries.



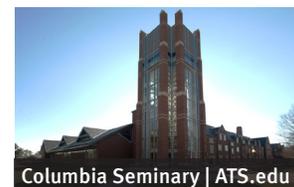
Courses and Events



Andover Newton | ATS.edu

Andover Newton Seminary at Yale Divinity School, located in New Haven, CT, offered a “Theology and Medicine” course during the 2017 fall semester. This monthly class explored the challenges of contemporary medicine from a theological perspective. Fifteen pastors and chaplains attended the class; most were from CT, but several traveled from other states (MA, NC, NJ, NY), and one came from a U.S. Air Force base in Germany. A modified course was also offered in the 2018 fall semester.

Additionally, Andover Newton held a campus-wide forum in September 2017 on “Clergy Burnout and Coping,” a major problem in ministry. Dr. Ben Doolittle, physician and ordained clergy member, led the event and discussed his research about the psychology of burnout.



Columbia Seminary | ATS.edu

Columbia Theological Seminary, located in Decatur, GA, offered an intensive online course in January 2018. Called “Your Spiritual Brain,” the course examined how faith is shaped by neural processes underlying human thought and action. Nineteen clergy members participated in the class.

Columbia also hosted five “Leadership in Ministry” workshops between November 2017 and May 2018, which took place in Atlanta, GA; Lynchburg, VA; and Boston, MA. More than 50 pastors attended the workshops, whose topics included astrobiology, neural plasticity, and social neuroscience.



Concordia Seminary of the Lutheran Church Missouri Synod, located in St. Louis, MO, offered a 3-day workshop in April 2018 called “What Pastors Need to Know About Theology in a Scientific World” that considered the place and influence of science within society. Thirteen clergy members from across the country (CA, MD, MN, MO, SD) attended the invitation-only workshop. During this event, physicist Dr. Erica Carlson, the keynote speaker, gave a public lecture on what future pastors need to know about today's college students; her talk was attended by more than 30 clergy members and seminary students.



Pittsburgh Theological Seminary, located in Pittsburgh, PA, offered a 4-week online course in January-February 2018. Titled “Big Bang and Cosmic Creation,” it discussed the origins of the universe and was attended by 25 clergy members.

Pittsburgh also invited scientists to discuss their research at six “Community and Conversations” sessions between October 2017 and April 2018. During that time, the seminary saw an influx of registrants compared to previous years’ sessions that did not involve science. Pittsburgh continued inviting scientists to speak at the next school year’s sessions.

In February 2018, Pittsburgh held a campus-wide event, “Holy Curiosity! Science, Wonder, and the Desire to Know,” featuring science historian Dr. Ted Davis and NASA scientist and DoSER Director Dr. Jennifer Wiseman. The event was attended by 149 clergy and laity.

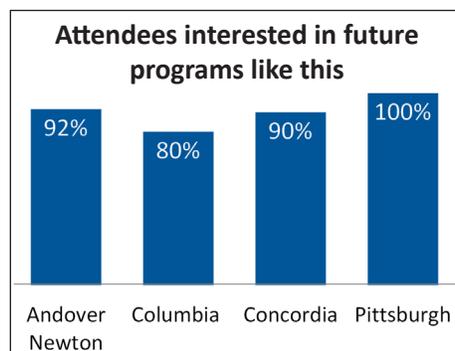
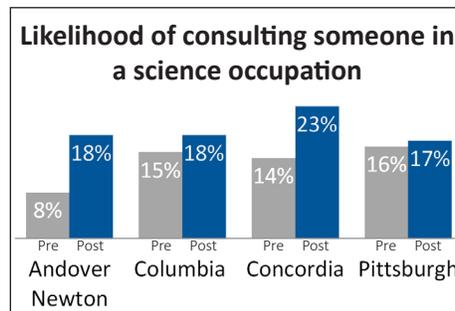
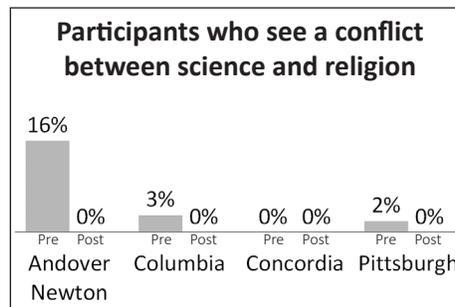
Outcomes

Pre- and post-program surveys (Andover Newton, $n=12$; Columbia, $n=75$; Concordia, $n=21$; Pittsburgh, $n=74$) and interviews found that by the end of their respective programs, participants reported:

- Increased interest in science
- Greater likelihood of including science in their congregational engagement
- Viewing science and religion as either collaborative or independent rather than conflicting
- Increased likelihood of consulting someone in a science occupation
- Desire to further explore and directly address the intersection of science and faith in future learning experiences

“[The course] caused me to take my ministry in a different direction, and it's making me more of a leader in my community now.”

– Andover Newton Seminary participant





Participants of the culminating Science in Continuing Education for Pastors workshop held in Washington, D.C. | AAAS DoSER

Culminating Workshop

The Science in Continuing Education for Pastors workshop, which took place at AAAS Headquarters in Washington, D.C. in August 2019, sought to understand Christian faith communities' relationships with science and to identify perspectives, concerns, and opportunities to engage in better dialogue. The workshop also served as an opportunity to gather ideas for a second phase of the Continuing Education project.

Attendees consisted of Continuing Education project participants as well as local scientists and pastors. They discussed areas of interest specific to the intersection of science with Christian church communities, and they explored programmatic and educational needs that should be addressed for more productive conversations about science in faith communities.

Rather than resolving big questions or achieving consensus on specific science and society issues, the workshop sought to:

- Identify the strengths, weaknesses, opportunities, and challenges facing the science-religion relationship within church communities
- Recommend actionable initiatives that could be formulated into practical, fundable projects
- Establish working relationships between Washington, D.C. area scientific and religious leaders

Recommendations

Participant feedback suggests that future programming should do the following:

- Ensure there is time for discussions, and organize spaces that facilitate conversation. For instance, programs with a large lecture could include smaller breakout sessions. Online courses could include discussion boards that encourage dialogue among participants and with the instructor(s).

- Directly address the relationship between science and faith in course programming. Relatedly, participants had strong, positive reactions to encountering scientists who were also Christian, since they have firsthand experience navigating the intersection of science and faith.
- Provide participants with structured access to science resources such as lists of relevant books, publications, and websites, or recommended further reading.
- Spread out programmatic elements like course length, event quantity, etc. Programs that spanned longer periods of time were associated with more positive attitudes toward science.
- Consider the target audience. Different formats attracted different crowds; workshops were most popular among clergy, whereas online classes and lecture series had a stronger lay leader presence.
- Target clergy beyond those already interested in science. A pre-existing interest in science appears to be a reason participants attended pilot program courses and events. Program organizers should recruit through broader seminary alumni networks, alumni networks from this pilot program, and other centralized places.
- Provide more opportunities for participants to develop ideas on how to apply their program experience to their ministries. This would give practical benefits for the clergy and provide further opportunities for science and faith conversations.

DoSER hopes to incorporate the knowledge and ideas gained from the seminaries' programs, participant feedback, and the culminating workshop into a second phase of the Continuing Education project that will continue integrating science into the theological education community.

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ABOUT AAAS | DOSER

The American Association for the Advancement of Science (AAAS) seeks to advance science, engineering, and innovation throughout the world for the benefit of all people. AAAS established the Dialogue on Science, Ethics, and Religion (DoSER) program in 1995 to facilitate communication and understanding between scientific and religious communities. For more information about AAAS, visit AAAS.org.

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